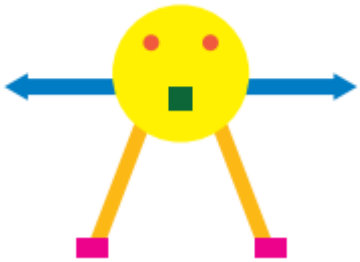
# Chapter – 1

# Geometry

## Ex 1.1

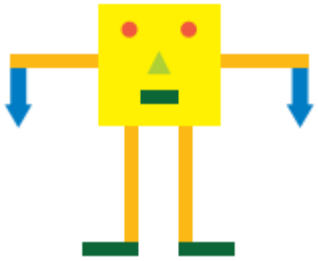
**A. Write down the names of shape in the following pictures.**

**(i)**



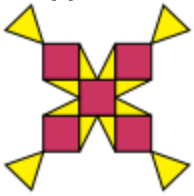
**Answer:**
Circle, square, rectangle, triangle

**(ii)**



**Answer:**
Square, circle, triangle, rectangle

**B. (i) Write the number of squares and triangles in the given picture.**



Square _____
Triangle _____

**Answer:**
Square __5__
Triangle __12__

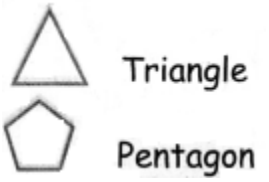
**(ii) Write the number of rectangles and triangles in the given picture**

Rectangle _____
Triangle _____

**Answer:**
Rectangle __3__
Triangle __1__

**(iii) Identify the cut shapes and write the names in the boxes given below.**

**Answer:**




**Answer:**

## Ex 1.2

**A. Fill in the blanks.**

**(i) All closed four sided figures are called _____.**

**Answer:**
quadrilateral

**(ii) A _____ has four equal sides and equal diagonals.**

**Answer:**
square

**(iii) The opposite sides of a _____ are equal.**

**Answer:**
rectangle.

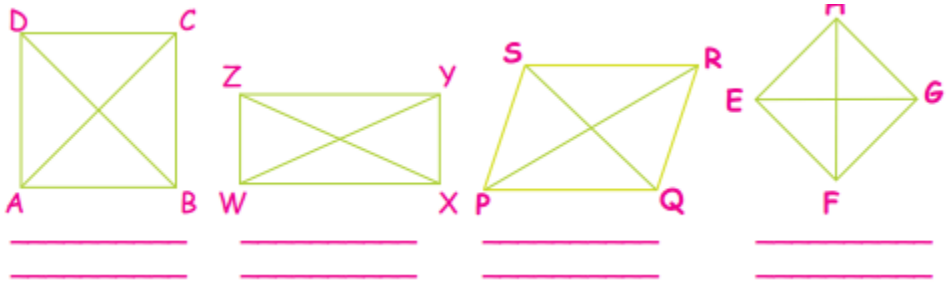
**(iv) A _____ has no sides.**

**Answer:**
circle

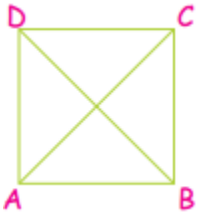
**(v) Diagonals are equal in _____ and _____.**

**Answer:**
square, rhombus

**B. Write the name of the sides and diagonals.**

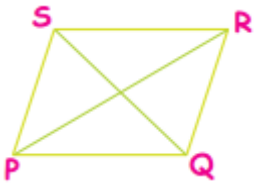


**Answer:**




Sides = AB, BC, CD, AD
Diagonals = AC, BD


Sides = WX, XY, YZ, ZW
Diagonals = WY, XZ




Sides = PQ, QR, RS, SP
Diagonals = PR, QS


Sides = EF, FG, GH, EH
Diagonals = EG, FH

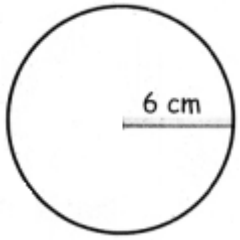
## Ex 1.3

**Draw circles for the following measurements.**
a. 6 cm
b. 5.5 cm
c. 8 cm

d. 6.8 cm
e. 8.6 cm

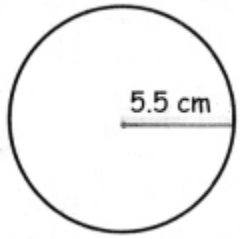
**Answer:**
**a. Draw a circle of radius 6 cm using a compass.**

**Steps:**
1. Take a compass and fix the pencil in it.
2. Measure 6 cm on the compass using ruler.
3. Place the needle of the compass and keep it fixed on the paper.
4. Move the pencil around it in any direction till your return to the starting point.




**b. Draw a circle of radius 5.5 cm using a compass.**

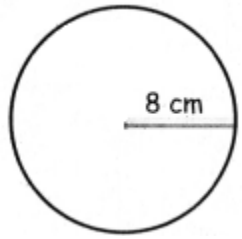
**Steps:**
1. Take a compass and fix the pencil in it.
2. Measure 5.5 cm on the compass using ruler.
3. Place the needle of the compass and keep it fixed on the paper.
4. Move the pencil around it in any direction till your return to the starting point.




**c. Draw a circle of radius 8 cm using a compass.**

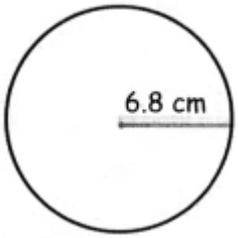
**Steps:**
1. Take a compass and fix the pencil in it.
2. Measure 8 cm on the compass using ruler.
3. Place the needle of the compass and keep it fixed on the paper.

4. Move the pencil around it in any direction till your return to the starting point.



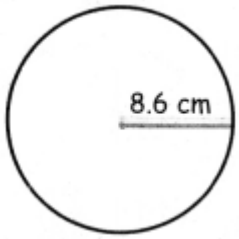

**d. Draw a circle of radius 6.8 cm using a compass.**

**Steps:**
1. Take a compass and fix the pencil in it.
2. Measure 6.8 cm on the compass using ruler.
3. Place the needle of the compass and keep it fixed on the paper.
4. Move the pencil around it in any direction till your return to the starting point.




**e. Draw a circle of radius 8.6 cm using a compass.**

**Steps:**
1. Take a compass and fix the pencil in it.
2. Measure 8.6 cm on the compass using ruler.
3. Place the needle of the compass and keep it fixed on the paper.
4. Move the pencil around it in any direction till your return to the starting point.



## Ex 1.4

**A. Fill in the blanks.**

**(i) All the radii of a circle are _____ .**

**Answer:**
equal

**(ii) The _____ is the longest chord of a circle.**

**Answer:**
diameter

**(iii) A line segment joining any point on the circle to its center is called _____ the of the circle.**

**Answer:**
radius

**(iv) A line segment with its end points on the circle is called a _____.**

**Answer:**
chord

**(v) Twice the radius is _____.**

**Answer:**
diameter

**B. Find the diameter of the circle**
(i) Radius = 10 cm
(ii) Radius = 8 cm
(iii) Radius = 6 cm

**Answer:**
(i) Radius = 10 cm
Diameter = 2 × radius = 2 × 10
Diameter = 20 cm

(ii) Radius = 8 cm
Diameter = 2 × radius = 2 × 8
Diameter = 16 cm

(iii) Radius = 6 cm
Diameter = 2 × radius = 2 × 6
Diameter = 12 cm

**C. Find the radius of the circle.**
(i) Diameter = 24 cm
(ii) Diameter = 30 cm
(iii) Diameter = 76 cm

**Answer:**
(i) Diameter = 24 cm

$$\text{Radius} = \frac{\text{diameter}}{2} = \frac{24}{2} = 12\text{cm}$$

(ii) Diameter = 30 cm

$$\text{Radius} = \frac{\text{diameter}}{2} = \frac{30}{2} = 15\text{cm}$$

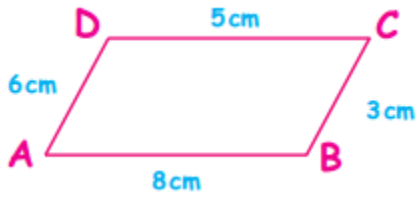
(iii) Diameter = 76 cm

$$\text{Radius} = \frac{\text{diameter}}{2} = \frac{76}{2} = 38\text{cm}$$

## Ex 1.5

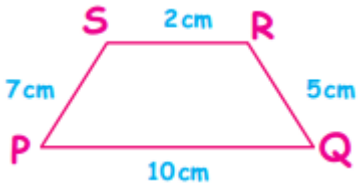
**A. Find the perimeter of the following figures**

**i.**



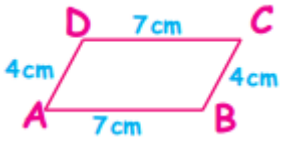

**Answer:**
Perimeter = 8 + 3 + 5 + 6
= 22 cm

**ii.**



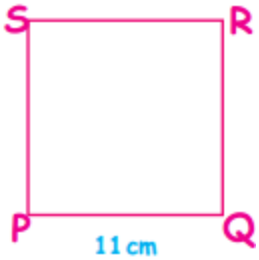

**Answer:**
Perimeter = 10 + 5 + 2 + 7
= 24 cm

**iii.**



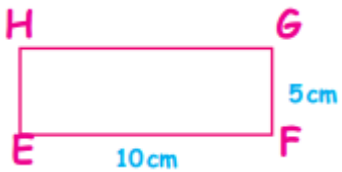

**Answer:**
Perimeter = 7 + 4 + 7 + 4
= 22 cm

**iv.**




**Answer:**
Perimeter = 11 + 11 + 11 + 11
= 44 cm

**v.**



**Answer:**
Perimeter = 10 + 5 + 10 + 5
= 30 cm

**B. Solve the following**

**Question 1.**
A side of a square-shaped sandbox in Gandhi Park measures 30 cm. Determine the perimeter of the sand box.

**Answer:**
Side of a sand box = 30cm
Perimeter = 30 + 30 + 30 + 30
= 120 cm

**Question 2.**
Find the perimeter of a rectangle, whose sides are 12 cm and 8 cm.

**Answer:**
Side of a rectangle are 12 cm and 8 cm.
Perimeter = 12 + 8 + 12 + 8
= 40cm

**Question 3.**
Find the perimeter of the triangle, whose sides are 13 cm, 5 cm and 14 cm.

**Answer:**
Length of sides are 13cm, 5cm and 14cm
Perimeter = 13 + 5 + 14
= 32cm

**Question 4.**
The adjacent sides of a parallelogram are 6 cm and 7 cm. What is the perimeter of the parallelogram?

**Answer:**
Adjacent sides of a parallelogram are 6cm and 7cm.
Perimeter = 6 + 7 + 6 + 7
= 26cm

**Question 5.**
The sides of a trapezoid measures 8 cm, 7 cm, 4 cm and 5 cm respectively. What is the perimeter of the trapezoid?

**Answer:**
Side of a trapezium are 8cm, 7cm, 4cm and 5cm.
Perimeter = 8 + 7 + 4 + 5
= 24cm

## Ex 1.7

**A. Choose the correct answer:**

**(i) A cuboid has _____ edges.**
(a) 6
(b) 8
(c) 12

**Answer:**
12

**(ii) The shape of a dice is like a _____.**
(a) cuboid
(b) cube
(c) sphere

**Answer:**
(b) cube

**(iii) A _____ has a curved surface and two plane faces.**
(a) cylinder
(b) cone
(c) sphere

**Answer:**
(a) cylinder

**(iv) I have one vertex and one plane face. I am a _____.**
(a) cone

(b) cylinder
(c) sphere

**Answer:**
(a) cone

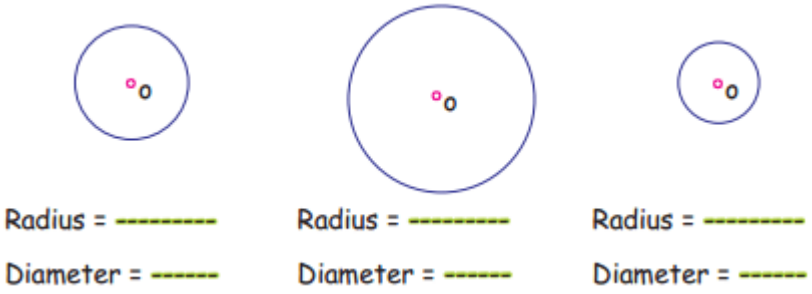
**(v) A cube has _____ vertices.**
(a) 8
(b) 12
(c) 6

**Answer:**
(a) 8

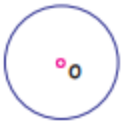
## InText Questions

### Activity (Text Book Page No. 8)

**Measure the radius and diameter of the following circles.**




**Answer:**



Radius = 1 cm
Diameter = 2 cm

Radius = 1.7 cm
Diameter = 3.4 cm

Radius = 0.7 cm
Diameter = 1.4 cm

## Activity (Text Book Page No. 9)

Measure the sides arid identify the names of different objects and find the differences among them and fill the table given below.
(a) Chessboard
(b) Postcard
(c) Window
(d) Paper
(e) Newspaper
(f) Maths Kit box.
(g) Kite

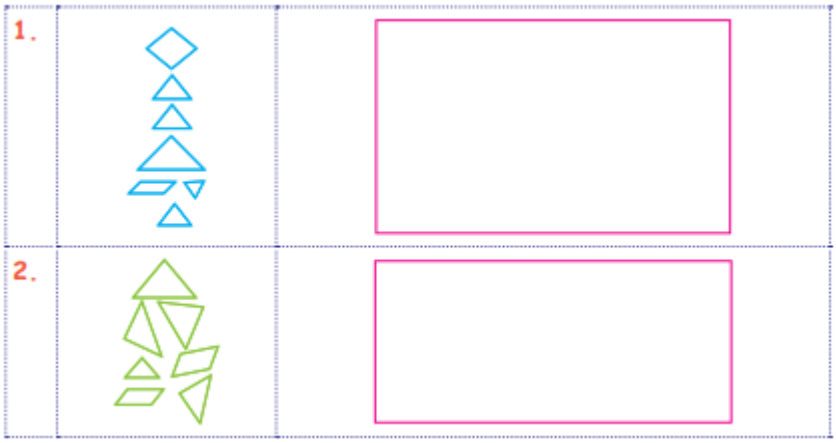
| Shapes | Object in the shape | Sides | Vertices | Diagonals |
|---|---|---|---|---|
| Square | | Four equal sides | 4 | Two diagonals are equal |
| Rectangle | | | | |
| Parallelogram | | | | |
| Rhombus | | | | |

**Answer:**

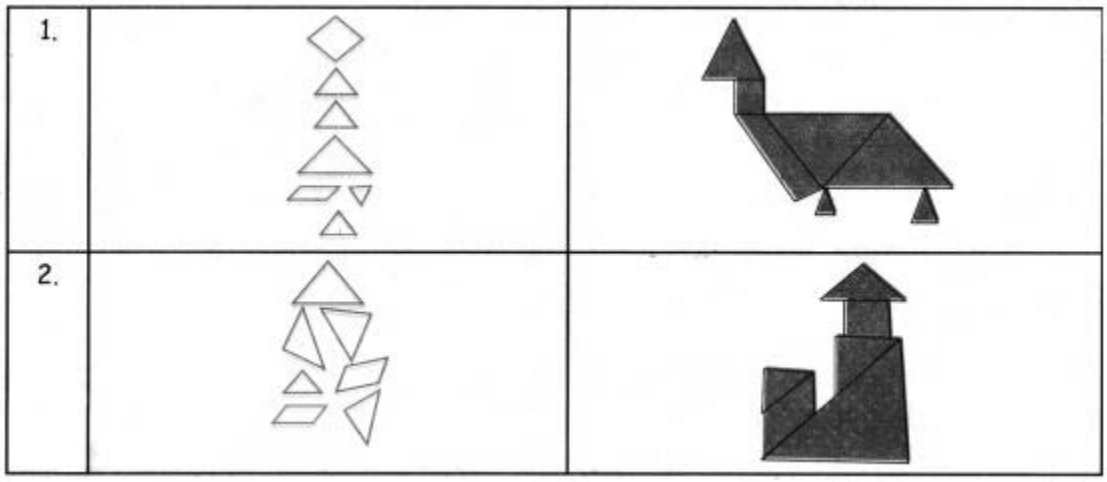
| Shapes | Object in the Shapes | Sides | Vertices | Diagonals |
|---|---|---|---|---|
|  Square | | Four equal sides | 4 | Two diagonals are equal |
|  Rectangle | | Opposite sides are equal | 4 | Two diagonals |
|  Parallelogram | | Opposite sides are equal | 4 | Two diagonals |
|  Rhombus | | Four equal sides | 4 | Two diagonals |

## Activity (Text Book Page No. 12)

Arrange the tangram pieces to from pictures.

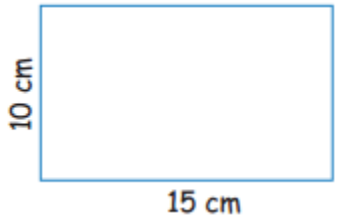


**Answer:**

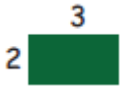



## Activity (Text Book Page No. 14)

Which tile will you choose to fill the space given below and find how many tiles are needed to fill the given space.




(a)

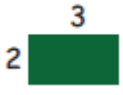



(b)


(c)


**Answer:**

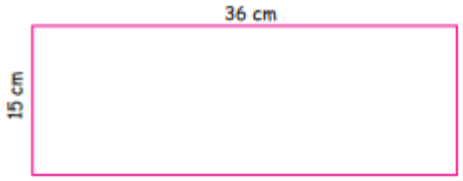
(a)



Perimeter = 2 + 3 + 2 + 3 = 10 cm
No of tiles needed = 5

## Activity (Text Book Page No. 14 & 15)

Fill the table given below by fixing the appropriate tile in the space given below




| S.No. | Shape of the tile | Number of tiles | Does it exactly fits the space? |
|---|---|---|---|
| 1. | Triangle (4cm, 5cm, 5cm) | 2 | no |
| 2. | Rectangle (3cm, 6cm) | 30 | yes |
| 3. | Rectangle (6cm, 5cm) | | |
| 4. | Square (side 6cm) | | |
| 5. | Rectangle (5cm, 12cm) | | |
| 6. | Rectangle (6cm, 18cm) | | |
| 7. | Rectangle (3cm, 12cm) | | |
| 8. | Triangle (3cm, 4cm, 5cm) | | |

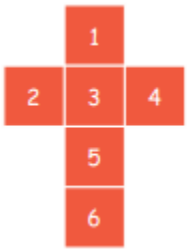
**Answer:**

| S.No | Shape of the tile | Number of tiles | Does it exactly fi ts the space? |
|---|---|---|---|
| 1. | Triangle (4cm, 5cm, 5cm) | 2 | No |
| 2. | Rectangle (3cm, 6cm) | 30 | Yes |
| 3. | Rectangle (3cm, 6cm) | 30 | Yes |
| 4. | Square (side 6cm) | 15 | Yes |
| 5. | Rectangle (5cm, 12cm) | 9 | Yes |
| 6. | Rectangle (6cm, 18cm) | 5 | Yes |
| 7. | Rectangle (3cm, 12cm) | 15 | Yes |
| 8. | Triangle (3cm, 4cm, 5cm) | 90 | Yes |

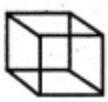
## Activity (Text Book Page No. 16)

**a. Form the cube by folding the nets given below.**

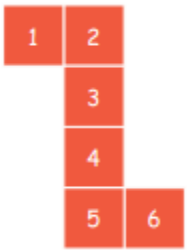
**Question 1.**



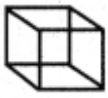

**Answer:**



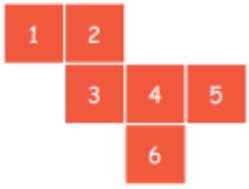
**Question 2.**



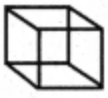

**Answer:**



**Question 3.**

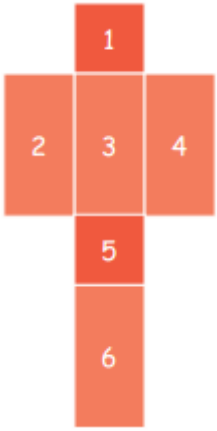



**Answer:**



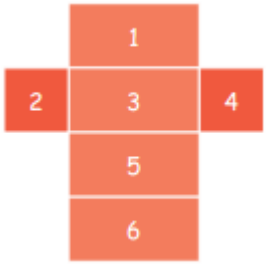
**b. Use these nets to form cuboids.**

**Question 1.**

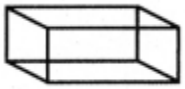



**Answer:**

**Question 2.**




**Answer:**



**c. Make a cone with semicircle.**

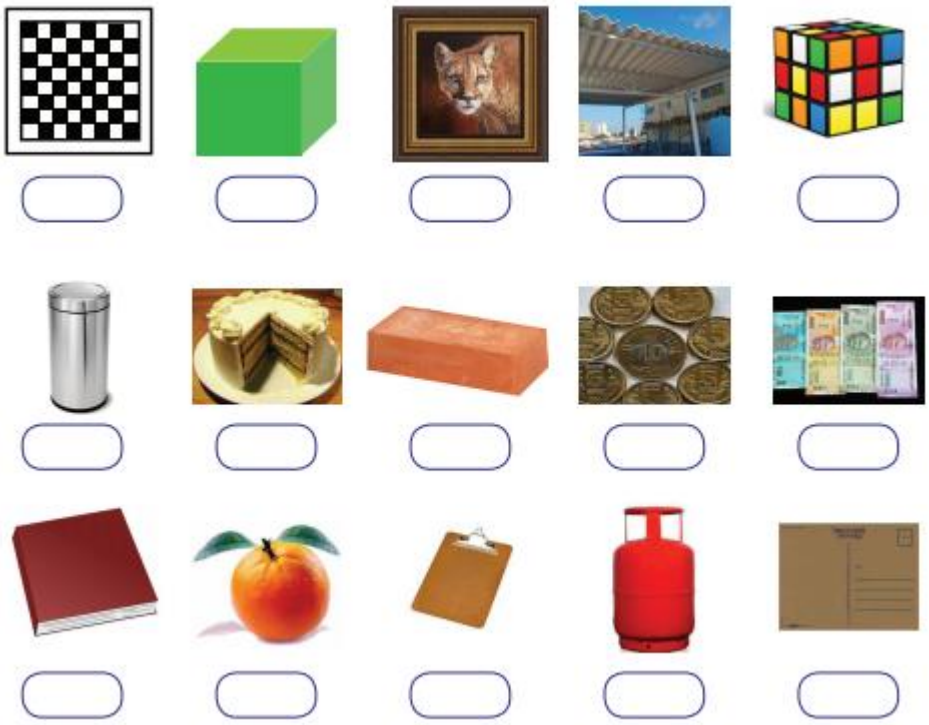
**Answer:**

**d. Make a cylinder using rectangle sheet.**

**Answer:**

**Find out 2D and 3D objects from the given pictures.**

**(Text Book Page No. 18)**



**Answer:**